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(FILE 'HOME' ENTERED AT 14:22:40 ON 29 FEB 2008)

FILE 'CAPLUS' ENTERED AT 14:22:49 ON 29 FEB 2008

L1 12854 S CATIONIC(L) (DYE? OR AZO OR MONOAZO OR DISAZO OR HYDRAZON?)

L2 71224 S ANION(L) (EXCHANGE OR EXCHANG?)

L3 62 S L1 AND L2

L4 15 S L3 AND DYES/SC

=> d 1-15 bib abs ind

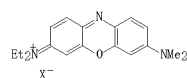
LA ANSWER 1 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 1995:742943 CAPLUS  
DN 123:115352  
TI Manufacture of cationic polymethine dye-borate  
complexes by anion exchange in homogeneous solutions  
IN Sato, Takashi; Hagiwara, Toshio; Kimura, Yoshio  
PA Tokuyama Sekyu Kagaku Kk., Japan; Showa Denko Kk  
SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 07150069	A	19950613	JP 1993-321225	19931126
JP 3418706	B2	20030623		
PRAI JP 1993-321225		19931126		
OS MARPAT 123:115352				
AB	The title complexes R1R2R3R4B- D <sup>+</sup> (I) are prepared by ion exchange reaction between M-D <sup>+</sup> and R1R2R3R4B- Z <sup>+</sup> dissolved in a solvent in which I is not soluble (D <sup>+</sup> = cationic dye; R1-4 = alkyl, aryl, aralkyl, alkaryl, alkenyl, alkynyl, alicyclic, heterocyclic, allyl; M- = anion; Z <sup>+</sup> = quaternary ammonium). 3-Ethyl-2-methylbenzothiazolium iodide, $\beta$ -methoxyacrolein, EtOH, and Et3CN were stirred at room temperature for 4 h, treated with a solution of tetrabutylammonium butyltriphenylborate in MeCN to obtain 3,3'-diethylthiadiazabocyanine butyltriphenylborate in 91% yield.			
IC ICM C09B069-02				
ICS C09B023-00; C09B067-32				
CC 41-6 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)				
ST cyanine dye complex salt				
IT Dyes, cyanine				
RL: IMF (Industrial manufacture); PREP (Preparation)				
(manufacture of cationic polymethine dye-borate complexes by anion exchange in homogeneous solns.)				
IT 141714-54-7P 166526-85-8P 166526-86-9P 166526-88-1P				
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				
(manufacture of cationic polymethine dye-borate complexes by anion exchange in homogeneous solns.)				
IT 122-51-0, Ethyl orthoformate 3119-93-5, 3-Ethyl-2-methylbenzothiazolium iodide 4652-35-1, $\beta$ -Methoxyacrolein 5418-63-3 6961-56-4, 1,1-Bis(p-diethylaminophenyl)ethylene 80912-02-3 120307-06-4, Tetrabutylammonium butyltriphenylborate 141714-68-3 166526-90-5 166526-92-7				
RL: RCT (Reactant); RACT (Reactant or reagent)				
(manufacture of cationic polymethine dye-borate complexes by anion exchange in homogeneous solns.)				

LA ANSWER 2 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 1990:58202 CAPLUS  
DN 112:58202  
TI The chromatographic behavior of some hydrophilic dyes and dye intermediates on thin layers of strong and weak ion exchangers  
AU Freeman, H. S.; Hao, Z.; Hsu, W. W.  
CS Dep. Text. Eng., Chem., Sci., North Carolina State Univ., Raleigh, NC, 27695-8302, USA  
SO Journal of Liquid Chromatography (1989), 12 (6), 919-35  
CODEN: JLCHDS; ISSN: 0148-3919  
DT Journal  
LA English  
AB The chromatog. behavior of some polar organic dyes and dye intermediates on thin layers of various forms of cationic and anionic exchange resins was investigated. The stationary ion and the mobile ion of both types of exchangers greatly affected both the level of tailing and the Rf values of the adsorbed compds. These resins were more suitable for evaluating the relatively simple dyes containing an SO3Na group than the higher mol. weight polyazo direct dyes used on cellulosic substrates. The Li<sup>+</sup> and H<sup>+</sup> forms of the cation exchangers worked better than their counterparts. Cationic dye mols. required the use of anion exchangers, with the AcO<sup>-</sup> form giving better chromatograms than the ClO4<sup>-</sup> form.  
CC 41-1 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
ST chromatog dye ion exchange  
IT Dyes (hydrophilic, ion-exchange chromatog. of)  
IT Dyes, anthraquinone  
Dyes, azo (ion-exchange chromatog. of)  
IT Dyes (intermediates, ion-exchange chromatog. of)  
IT 9004-32-4, Carboxymethyl cellulose 9013-34-7, Diethylaminoethyl cellulose 9086-60-6, Carboxymethyl cellulose ammonium salt 50935-44-9, Fixion 50XS 55962-76-0, Carboxymethyl cellulose lithium salt 125063-57-2, Diethylaminoethyl cellulose perchlorate salt 125063-58-3, Diethylaminoethyl cellulose acetate salt  
RL: USES (Uses)  
(dye ion-exchange chromatog. on)  
IT 83-64-7, S Acid 87-02-5, J Acid 90-20-0, H Acid 90-51-7, Gamma acid 134-47-4, J Acid urea 587-98-4, C.I. Acid Yellow 36 633-96-5, C.I. Acid Orange 7 2465-27-2, C.I. Basic Yellow 2 2861-02-1, C.I. Acid Blue 45 3520-42-1, C.I. Acid Red 52 4438-16-8, C.I. Basic Orange 1 8004-87-3, C.I. Basic Violet 1 55840-82-9, C.I. Basic Blue 3 71786-27-1 124411-11-6  
RL: PROC (Process)  
(ion-exchange chromatog. of)

LA ANSWER 3 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 1985:606307 CAPLUS  
DN 103:106307  
ORIEF 103:17037a,17040a  
TI Replacing anions of organic cationic salts  
IN Drexhage, Karl H.  
PA Eastman Kodak Co., USA  
SO U.S., 7 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4524204	A	19850618	US 1980-174959	19800804
PRAI US 1980-174959		19800804		
OS MARPAT 103:106307				
GI				



AB In a process for increasing the solubility in organic solvents of cationic salts, especially certain photog. dyes, the salt is dispersed or dissolved in a water-immiscible organic solvent along with the acid of a solubilizing anion, the solution or suspension is treated with H2O to remove the acid formed in the anion exchange reaction as well as excess acid of the solubilizing anion, the organic solution or suspension is separated from the aqueous solution, and the cationic salt having the solubilizing anion is recovered from the organic solution or suspension. Typical starting cationic salts are perchlorates, tetrafluoroborates, halides, or hexafluorophosphates which are converted by the described process to trifluoroacetates or heptafluorobutyrate. For example, a mixture of 10 g I (X = ClO4) [24796-94-9], 75 mL CH2Cl2, and 10 mL trifluoroacetic acid (II) [76-05-1] was shaken with an equal volume of H2O, the layers were allowed to sep., and the organic phase was separated, mixed with 10 mL III, and extracted with H2O. Addition of II and extraction with H2O were repeated 2 more times to give a solution of I (X = F3CCO2) [69700-13-6] in CH2Cl2 from which the product was recovered as a crystalline solid by evaporation of solvent and excess II followed by cooling.  
IC ICM C07D265-38  
ICS C07D311-60; C07D335-02; C07D409-06  
INCL 544103000  
CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)  
ST cationic dye anion exchange; solubilization cationic dye; trifluoroacetate cationic dye; heptafluorobutyrate cationic dye  
IT Photography (cationic dyes for, anion exchange of, for increased solubility in organic solvents)  
IT Anion exchange (of cationic dyes, for increased solubility in organic solvents)  
IT Dyes (cationic, anion exchange reactions of, for increased solubility in organic solvents)

LA ANSWER 3 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
IT 76-05-1, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(anion exchange reaction of, with cationic dye perchlorates)  
IT 375-22-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(anion exchange reaction of, with cationic dyes)  
IT 24796-94-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(anion exchange reaction of, with trifluoroacetic acid)  
IT 69700-13-6P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)  
IT 75-09-2, uses and miscellaneous  
RL: USES (Uses)  
(solvents, for anion exchange reactions of cationic dyes)

L4 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1984:105085 CAPLUS

DN 100:105085

OREF 100:15985a,15988a

TI Conversion of sparingly soluble inorganic salts of cationic dyes or fluorescent whiteners into easily soluble salts of organic acids

IN Pfenninger, Heinz; Bruttel, Beat

FA Ciba-Geigy A.-G., Switz.

SO Bur. Pat. Appl., 18 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 97125	A2	19831228	EP 1983-810253	19830609
EP 97125	A3	19850502		
EP 97125	B1	19870826		
R: CH, DE, FR, GB, LI				
CH 659654	A5	19870213	CH 1982-3691	19820615
US 4559144	A	19851217	US 1983-503484	19830613
JP 59006262	A	19840113	JP 1983-105969	19830615
JP 04027271	B	19920511		
CH 1982-3691	A	19820615		

PRAI MARPAT 100:105085

AB Inorg. salts of cationic dyes or fluorescent whiteners are converted to the corresponding salts of organic acids, without intermediate isolation of the free base of the dye or whitener, by anion exchange using Donnan dialysis. Numerous examples are given which describe the conversion of chlorides, sulfates, and methosulfates to conductivity aqueous solns. of the corresponding acetates.

IC C09B069-06; C09B067-54; D06L003-12

CC 41-1 (Dyes, Organic Pigments, Fluorescent Brighteners, and

Photographic Sensitizers)

ST cationic dye anion exchange;

Donnan dialysis dye anion exchange; acetate

cationic dye

IT Anion exchange

(of cationic dyes and fluorescence brighteners, for

conversion to soluble carboxylate salts)

IT Dialysis

(Donnan, in anion exchange of cationic

dyes and fluorescent brighteners)

IT Dyes

Fluorescent brighteners

(cationic, anion exchange of, by Donnan

dialysis, for formation of carboxylate salts with improved water solubility)

IT 71-50-1, uses and miscellaneous

RL: USES (Uses)

(exchange of, with inorg. anions of

cationic dyes and fluorescent brighteners)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L4 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1982:219249 CAPLUS

DN 96:219249

OREF 96:36255a,36258a

TI Preparation and properties of some 1,3,3-trimethyl-2-formylindolinium N-methyl-N'-4-methoxyphenylhydrazono salts

AU Stepanov, B. I.; Chalykh, E. A.; Sazanova, A. A.; Ershova, M. D.

CS Mosk. Khim.-Tekhnol. Inst., Moscow, USSR

SO Izvestiya Vysshikh Uchebnykh Zavedenii, Khimiya i Khimicheskaya

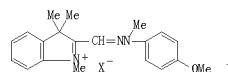
Tekhnologiya (1982), 25 (1), 91-3

CODEN: IYUKAR; ISSN: 0579-2991

DT Journal

LA Russian

GI



AB To improve the solubility in water of golden yellow dye I (X = MeSO4) [54060-92-3] (2.4 g/L at 298 K), it was converted to the acetate [58798-47-3] (solubility 280 g/L at 298 K) by way of the quaternary base (I, X = OH) (II) [81892-55-9]. Conversion by way of the bicarbonate

[55636-82-3] gave an impure acetate containing 520% of the initial sulfate. II was unstable thermally or to storage and was transformed to the carbinol base [81241-99-8], which was completely miscible with water, stable to storage for a year, and suitable for dyeing acrylic fibers in the gel state.

CC 41-3 (Dyes, Fluorescent Brighteners, and Photographic

Sensitizers)

ST indolecarboxaldehyde phenylhydrazono cationic deriv; soly

azomethine dye

IT Dyeing

(of acrylic fibers, in gel state, by cationic derivative of

formylindole phenylhydrazono)

IT Dyes

(cationic, water solubility of, anion effect on)

IT 81241-99-8

RL: USES (Uses)

(dye, for acrylic fibers, formation of)

IT 55636-82-3P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and conversion to acetate)

IT 81892-55-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(preparation and reactions of)

IT 58798-47-3P

RL: FRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and solubility of)

IT 81892-56-0P

RL: FRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and solubility of, acrylic fiber dyeing in gel state in relation to)

IT 54060-92-3

RL: PROC (Process)

(solubilization of, by anion exchange)

L4 ANSWER 6 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1982:21278 CAPLUS

DN 96:21278

OREF 96:3554a,3555a

TI Cationic dyes

IN Gleinig, Harald; Berger-Lohr, Bernd; Breig, Kurt

FA Bayer A.-G., Fed. Rep. Ger.

SO Ger. Offen., 11 pp.

CODEN: GWXXBX

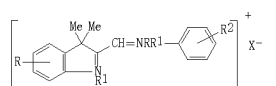
DT Patent

LA German

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3013272	A1	19811008	DE 1980-3013272	19800405
US 4342867	A	19820803	US 1981-245412	19810319
EP 37506	A1	19811014	EP 1981-102164	19810323
R: CH, DE, FR, GB, IT				
JP 56155246	A	19811201	JP 1981-48517	19810402
PRAI DE 1980-3013272	A	19800405		

GI



AB Cationic dyes (I; R = H, C1-4 alkyl, C1-4 alkoxy, NO2, halogen; R1 = C1-3 alkyl; R2 = H, C1-4 alkyl, C1-4 alkoxy, halogen, phenylazo; X- = anion) are manufactured by heating the corresponding azo base with (R10)2S02 in an organic solvent-free medium in the presence of water and optionally with exchange of the alkyl sulfate anion at a weight ratio of azo base to water 100:15-100 and a mol. ratio of azo base to (R10)2S02 of 1:1.5-2.5. Thus, I (R = H, R1 = Me, R2 = 4-MeO; X = MeOS03, Cl) were prepared by simultaneously adding 307 g dye base [40842-68-0] and 128 g NaOH to 252 g Me2S04 and 10 g NaOH, 100 g water was added, the mixture was heated until little or no starting material was present, optionally remethylated, and brought to pH 4-6 with HCl. This procedure gave a dye which dyes acrylic fibers a golden yellow shade and can be used without further purification

IC C09B055-00

CC 41-3 (Dyes, Fluorescent Brighteners, and Photographic

Sensitizers)

ST hydrazono cationic dye; cationic

azo dye; pollution

cationic dye; acrylic fiber dye

IT Dyes, azo

(cationic [(phenylhydrazono)methyl]indole derivs., for

acrylic fibers)

IT 52757-89-8D, salts

RL: USES (Uses)

(dye, for acrylic fibers, manufacture of)

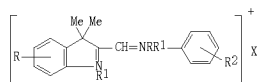
IT 40842-68-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(methylation of)

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1982:8143 CAPLUS  
 DN 96:8143  
 OREF 96:1469a,1472a  
 TI Cationic dyes  
 IN Gleinig, Harald; Berger-Loehr, Bernd; Breig, Kurt  
 PA Bayer A.-G., Fed. Rep. Ger.  
 SO Ger. Offen., 12 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 3013273	A1	19811008	DE 1980-3013273	19800405
US 4343936	A	19820810	US 1981-245411	19810319
EP 37505	A1	19811014	EP 1981-102163	19810323
EP 37505	B1	19830618		
R: CH, DE, FR, GB, IT				
JP 56155247	A	19811201	JP 1981-48518	19810402
PRAI DE 1980-3013273	A	19800405		
GI				



AB Cationic dyes (I; R = H, Cl-4 alkyl, Cl-4 alkoxy, NO2, halogen; R1 = C-3 alkyl; R3 = H, Cl-4 alkyl, Cl-4 alkoxy, halogen, phenylazo; X- = anion) were prepared by heating the free base or salt with (R1O)2SO2 in an organic-solvent free mixture in the presence of H2O and optionally with exchange of the alkyl sulfate anion using an azo base to water weight ratio of 100:20-3000 and mol. ratio of azo base to (R1O)2SO2 of 1:3.5-5.0. Thus, I (R = H, R1 = Me, R2 = p-MeO, X = MeSO3, Cl) was prepared by adding 470 g 70% of the corresponding HCl salt [79985-60-7] to a mixture of (MeO)2SO2 504, H2O 100, and NaOH 75 g, while also adding 145 g NaOH to maintain pH at 7-9, and the reaction mixture was heated, followed by thin-layer chromatog. to no or little starting material, and the product was optionally remethylated, isolated, and dried. This procedure gave a useful dye without any further purification  
 IC C09B055-00  
 CC 41-3 (Dyes, Fluorescent Brighteners, and Photographic Sensitizers)  
 ST alkylation hydrazone dye; cationic hydrazone dye; pollution free manuf cationic dye  
 IT Dyes, azo  
 (cationic [(phenylhydrazone)methyl]indole derivs.)  
 IT 52757-89-8DP, salts  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (dye, manufacture of)  
 IT 79985-60-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)

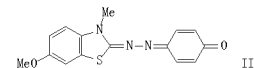
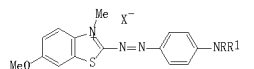
L4 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1981:408796 CAPLUS  
 DN 96:8796  
 OREF 96:1641a,1644a  
 TI Cationic dyes  
 IN Raue, Roderich; Giesecke, Heinz  
 PA Bayer A.-G., Fed. Rep. Ger.  
 SO Eur. Pat. Appl., 27 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA German  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 23652	A1	19810211	EP 1980-104239	19800718
EP 23652	B1	19840609		
R: BE, CH, DE, FR, GB, IT				
DE 2931772	A1	19810226	DE 1979-2931772	19790804
US 4349670	A	19820914	US 1980-169680	19800717
BR 8004855	A	19810210	BR 1980-4855	19800801
JP 56024450	A	19810309	JP 1980-105233	19800801
ES 493958	A1	19810616	ES 1980-493958	19800801
PRAI DE 1979-2931772	A	19790804		
OS MARPAT 96:8796				
GI For diagram(s), see printed CA Issue.				

AB Dyes (I; R, R1 = Me, Et; X = divalent residue of a 5- or 6-membered heterocycle; ring A may be substituted with Cl-4 alkyl, Cl-4 alkoxy, halogen; Y- = anion; n = 0, 1) are prepared by reaction of II (n = 0, 1) or III with R2C6H4SO3R1 (where R2 = H, Cl-4 alkyl, halogen, R1 = Me, Et) in the presence of water and an acid binding agent at 20-70°, and optionally exchanging R2C6H4SO3- with an anion used in dye preparation. I are used for dyeing acrylic fibers in greenish yellow to goldyellow shades. Thus, 4-pyridinecarboxaldehyde phenylhydrazone [7757-39-3] was suspended in H2O at 20° and stirred with PhSO3Me [80-18-2] at 20-25° with the pH controlled by aqueous NaOH to give IV [77947-25-2].  
 IC C09B026-04; C09B044-00  
 CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
 ST cationic hydrazone dye alkylation; acrylic fiber dye; benzenesulfonate ester alkylation hydrazone  
 IT Dyes  
 (cationic, [(methylphenylhydrazone)methyl]heterocyclic derivs.)  
 IT 77947-05-8P 77947-07-0P 77947-09-2P 77947-11-6P 77947-12-7P  
 77947-13-8P 77947-16-1P 77947-18-3P 77947-21-8P 77947-24-1P  
 77947-25-2P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of)  
 IT 40842-68-0  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with Me benzenesulfonate)  
 IT 4677-09-2 7727-07-3 7757-39-3 65373-75-3 66784-47-2 77342-39-3  
 77947-14-9 77947-19-4 77947-22-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with Me benzenesulfonate)  
 IT 80-18-2 515-46-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with phenylhydrazone derivs.)

L4 ANSWER 7 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 (reaction of, with di-Me sulfate)

L4 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1981:176666 CAPLUS  
 DN 94:176666  
 OREF 94:28885a,28888a  
 TI Transformations of benzothiazole cationic azo dyes in the presence of alkali reagents  
 AU Stepanov, B. I.; Chalykh, E. A.; Sazanova, A. A.; Stavinchuk, V. G.  
 CS Mosk. Khim.-Tekhnol. Inst., Moscow, USSR  
 SO Izvestiya Vysshikh Uchebnykh Zavedenii, Khimiya i Khimicheskaya Tekhnologiya (1981), 24(1), 86-9  
 CODEN: IYUKAR; ISSN: 0579-2991  
 DT Journal  
 LA Russian  
 GI



AB Stable, highly concentrated aqueous solns. of I (R = R1 = Me, X = HCOO- or AcO-) and I (R = Et, R1 = C2H4OH, X = HCOO- or AcO-) were prepared by treatment of I (X = MeSO4-) with Na2CO3 to give I (X = HCOO-) at pH = 6.0-7.5, followed by replacement of HCOO- with HCOO- or AcO-. I (X = MeSO4-) treated with Na2CO3 (0-96 h, 20°, pH = 7.1-8.5) gave I (X = HCOO-) in good yield, along with insignificant amts. of II. [38901-85-8] (0.09-0.80%) forming via I (X = OH-) due to hydrolysis, which was detected by extractional thin-layer chromatog.  
 CC 40-6 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
 ST benzothiazole cationic azo dye; stability benzothiazole azo dye; soly water benzothiazole dye; alkali treatment benzothiazole dye  
 IT Solubilization  
 (of benzothiazolium azo dyes, by anion exchange, extent of hydrolysis in)  
 IT Hydrolysis  
 (of benzothiazolium azo dyes, during solubilization by anion exchange)  
 IT 38901-85-8P  
 RL: FORM (Formation, nonpreparative); PREP (Preparation)  
 (formation of, in solubilization of benzothiazolium azo dyes)  
 IT 12270-13-2 15000-59-6  
 RL: PROC (Process)  
 (solubilization of, as acetate or formate or carbonate, extent of hydrolysis in)

L4 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1974:49266 CAPLUS  
 DN 80:49266  
 OREF 80:8035a,8038a  
 TI Concentrated dye solutions useful in textile treatment  
 IN Blass, Ulrich; Entschel, Roland  
 PA Sandoz Ltd.  
 SO Patentschrift (Switz.), 3 pp.  
 CODEN: SWXXAS  
 DT Patent  
 LA German  
 FAN CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CH 540387	B	19730928	CH 1971-14851	19700210
CH	1485171	D	19730450		
FRAI	CH 1971-14851	A	19700210		
AB	The solubility of cationic anthraquinone, oxazine, and quinophthalone dyes is improved by exchanging the anions for colorless, solubilizing anions in aqueous or aqueous organic solns. Thus, a solution of lead diacetate [301-04-2] 17, HOAc 15, and H <sub>2</sub> O 50 parts is mixed at 80 deg. with a solution of 45 parts [3-[(4-amino-3-bromoanthraquinone-1-yl)amino]propyl]trimethylammonium chloride (I) [50480-22-3] in 180 parts H <sub>2</sub> O, kept 2 days, and filtered to give a stable, deep blue solution useful for dyeing acrylic fibers.				
IC	D06P				
CC	40-6 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)				
ST	solubilizing cationic dye; anion exchange dye; anthraquinone dye solubilizing; lead acetate reaction dye				
IT	Dyes (cationic, anion exchange of, for improved solubility)				
IT	Solubilization (of cationic dyes, by anion exchange)				
IT	Anion exchange (of cationic dyes, for improved solubility)				
IT	301-04-2 513-77-9				
RL:	PROC (Process) (anion exchange of, with cationic dyes for improved solubility)				
IT	50807-92-6				
RL:	USES (Uses) (dye, anion exchange of, with barium carbonate for improved solubility)				
IT	50480-22-3 50807-90-4				
RL:	USES (Uses) (dye, anion exchange of, with lead acetate for improved solubility)				

L4 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 36790-27-9P 36790-28-0P 36790-29-1P 36790-30-4P 36790-31-5P  
 36790-32-6P  
 RL: IMP (Industrial manufacture); PREP (Preparation) (prepn. of)

L4 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1972:407283 CAPLUS  
 DN 77:7283  
 OREF 77:1255a,1258a  
 TI Azo dyes  
 IN Kruckenberg, Winfried  
 PA Farbenfabriken Bayer A.-G.  
 SO Ger. Offen., 173 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2036997	A	19720203	DE 1970-2036997	19700725
DE	2036997	B2	19750607		
DE	2036997	C3	19760108		
AT	303219	B	19721110	AT 1971-6385	19710722
CA	940123	A1	19740115	CA 1971-118841	19710722
AT	323701	B	19750725	AT 1971-11261	19710722
BE	770383	A1	19711201	BE 1971-106251	19710723
NL	7110207	A	19720127	NL 1971-10207	19710723
FR	2104807	A5	19720421	FR 1971-27152	19710723
FR	2104807	B1	19750711		
CH	7110939	D	19760831	CH 1971-10939	19710723
CH	586312	B5	19770331		
JP	51037295	B	19761014	JP 1971-54718	19710723
ES	393608	A1	19730801	ES 1971-393608	19710724
GB	1322835	A	19730711	GB 1971-34869	19710726
JP	51123377	A	19761028	JP 1976-35238	19760401
FRAI	DE 1970-2036997	A	19700725		
AB	Cationic dye I(R <sup>3</sup> = OMe, R <sup>1</sup> = H, X = 9 = H <sub>2</sub> P04-) (II) [34828-18-7] and cationic dye I(R = H R <sup>1</sup> = Me, X = H <sub>2</sub> P04-) [34828-19-8] were prepared. Anion exchange gave 6 other I with X = Cl-, Br-, or 0.5 SO <sub>4</sub> <sup>2-</sup> . I dyed polyacrylonitrile fibers, acid-modified polyamide and polyester piece goods, and East Indian sheepskin yellowish red to bluish red shades. For example, 5-amino-3-phenyl-1,2,4-thiadiazole was pulverized, treated with 85-90% H <sub>3</sub> PO <sub>4</sub> , diazotized, and coupled with PhN(CH <sub>2</sub> CH <sub>2</sub> OMe)CH <sub>2</sub> CH <sub>2</sub> N+Me <sub>2</sub> CH <sub>2</sub> Ph Cl <sup>-</sup> (prepared by condensing PhNHCH <sub>2</sub> CH <sub>2</sub> OMe with ClCH <sub>2</sub> CH <sub>2</sub> NMe <sub>2</sub> .HCl then PhCH <sub>2</sub> Cl) to give II, bluish red on polyacrylonitrile.				
IC	C09B				
CC	40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)				
ST	dye azo cationic; polyacrylonitrile azo dye; thiadiazole azo dye; sheepskin dye; polyamide dye; polyester dye				
IT	Dyes, azo ((phenylazo)thiadiazole quaternized ammonium derivs., synthetic fibers and leathers)				
IT	Acrylic fibers				
	Polyamide fibers				
	Polyester fibers				
RL:	USES (Uses) (dyes for, (phenylazo)thiadiazole quaternized ammonium derivs. as)				
IT	Dyeing (of synthetic fibers and sheep leather with quaternized ammonium derivs. of (phenylazo)thiadiazole compds.)				
IT	Leather (sheepskin, dyes for, (phenylazo)thiadiazole quaternized ammonium derivs. as)				
IT	34828-18-7P 34828-19-8P 36790-24-6P 36790-25-7P 36790-26-8P				

L4 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1960:25948 CAPLUS  
 DN 54:25948  
 OREF 54:5091d-h  
 TI The absorption of cationic surfactants by cellulosic materials. I. The uptake of cation and anion by a variety of substrates  
 AU Sexsmith, Frederick H.; White, Howard J., Jr.  
 CS Princeton Univ., Princeton, NJ  
 SO Journal of Colloid Science (1959), 14, 598-618  
 CODEN: JCSCAF; ISSN: 0095-8522  
 DT Journal  
 LA Unavailable  
 AB Absorption isotherms at 20-35° were determined for the cation and anion of cationic surface active agents in various aqueous solution-fiber systems at equilibrium. The agents studied were hexadecyltrimethylammonium bromide and octadecyltrimethylammonium bromide at concns. of 0.005-100 umoles/l. Absorption was observed on cotton, medium-high-tenacity viscose rayon, viscose rayon monofil, and oxycellulose. The major absorption processes were: (1) cation exchange, which was dependent on the exchange capacity of the substrate, and (2) ion-pair absorption, which was important at concns. near or above the critical concentration for micelle formation. At all except the highest ionic strengths, ion-pair absorption was consistent with the assumption that ions cluster on exchanged long-chain cations. The absorption of Emcol E-607-L (the dodecylxyethylamide of 1-(carboxymethyl)pyridinium chloride) on oxycellulose also was studied. The critical concentration for micelle formation of this agent was 0.001-0.002M. It and the long-chain bromides were much more effective than KBr, NaBr, Me<sub>4</sub>NBr, or benzyltrimethylammonium bromide in displacing H<sup>+</sup> ions from oxycellulose. Studies of the rates of absorption on the various substrates were consistent with the concept of 2 different absorption processes. When disperse dyes were added to systems in which the concentration of cationic agent exceeded the critical concentration for micelle formation, the fibers were thoroughly penetrated by dye, and the dyed fabrics were fast to washing. A cationic surface-active agent is apparently necessary for successful dyeing, since similar expts. with Na dodecyl sulfate gave poor results.  
 CC 26 (Dyes and Textiles)  
 IT Surface-active substances (absorption of anions and cations and equilibrium cation exchange of cationic, by cellulose derivs.)  
 IT Dyes (absorption of disperse, by cotton, oxycellulose and viscose rayon, cationic surfactants in)  
 IT Anions (absorption of, by cotton, oxycellulose and rayon, from cationic surface-active substances)  
 IT Cations (absorption of, from surface active substances by cotton, oxycellulose and rayon)  
 IT Cotton (cation exchange and equilibrium absorption from hexadecyltrimethyl- and trimethyloctadecylammonium bromide by)  
 IT Rayon (cation exchange and equilibrium absorption from hexadecyltrimethyl- and trimethyloctadecylammonium bromide by viscose)  
 IT Micelles (critical concentration of, of cationic surfactants)  
 IT Cellulose esters (formation effect on absorption of cationic surfactants)  
 IT Absorption (of anions and cations of surfactants by cellulosic materials)  
 IT Base exchange or Cation exchange (of hexadecyltrimethyl- or trimethyloctadecylammonium bromide with cotton, oxycellulose or rayon)

L4 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)  
 IT 6272-74-8, Emcol E-607-L  
 (absorption by oxycellulose)  
 IT 57-09-0, Ammonium, hexadecyltrimethyl-, bromide 1120-02-1, Ammonium,  
 trimethyloctadecyl-, bromide  
 (absorption of anions and cations and equilibrium cation  
 exchange of, by cellulose derivs.)  
 IT 109260-82-4, Pyridinium, 1-[(2-hydroxyethylcarbamoyl)methyl]-, laurate  
 (absorption on oxycellulose)  
 IT 9004-34-6, Oxycellulose  
 (cation exchange and equilibrium absorption from hexadecyltrimethyl- and  
 trimethyloctadecylammonium bromide by)  
 IT 9004-34-6, Cellulose  
 (derivs., absorption of anions and cations of surfactants and  
 equilibrium cation exchange of cationic surfactants by)

L4 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1969:9275 CAPLUS  
 DN 53:9275  
 OREF 53:1718f-g  
 TI Adsorption at organic surfaces. IV. Adsorption of sulfonated azo dyes by  
 chitin from aqueous solution  
 AU Giles, C. H.; Hasson, A. S. A.; Subramanian, R. V. R.  
 SO Journal of the Society of Dyers and Colourists (1968), 74, 682-8  
 CODEN: JSDCAA; ISSN: 0037-9859  
 DT Journal  
 LA Unavailable  
 AB cf. C.A. 52, 21119f; 50, 4601b. Lobster-shell chitin is used in quant.  
 adsorption studies with sulfonated azo dyes in aqueous  
 solns., usually in acid condition. The extent of adsorption is correlated  
 with the dye structure. The mechanism is largely one of phys.  
 association between aromatic residues of the dye and the insol.  
 chains of the chitin. In presence of inorg. acid, one sulfonate group in  
 the dye anion takes part in ion exchange  
 with inorg. anions at the cationic centers in chitin.  
 Addnl. such groups remain uncombined with substrate and reduce the  
 dye affinity.  
 CC 25 (Dyes and Textiles Chemistry)  
 IT Chemical constitution  
 (adsorption of azo dyes by chitin in relation to)  
 IT Dyes  
 (azo, sulfonated, adsorption by chitin)  
 IT Adsorption  
 (of dyes (azo sulfonated) by chitin from aqueous solns.)  
 IT 1398-61-4, Chitin  
 (dye (azo) adsorption by)

L4 ANSWER 14 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1968:83271 CAPLUS  
 DN 47:53207  
 OREF 52:9004i, 9605a-b  
 TI Dyeing filament nylon with acid dyes  
 AU Bittles, J. A.; Brooks, J. A.; Iammarone, J. J., Jr.; Landerl, H. P.  
 CS E. I. du Pont de Nemours & Co., Inc., Wilmington, DE  
 SO Am. Dyestuff Repr. (1968), 47(No. 6), (Proc. Am. Assoc. Textile Chemists  
 Colorists) F183-F186  
 DT Journal  
 LA Unavailable  
 AB Four aqueous level-dyeing procedures for applying acid dyes  
 to filament nylon are: solvent-assisted dyeing (I),  
 cationic agent-assisted dyeing (II), anionic  
 agent-assisted dyeing (III), and high-temperature dyeing  
 (IV). I is of little com. importance except in special cases because of  
 the expense and (or) hazards involved. With II dyeings with  
 excellent levelness can be obtained at temps. below the boil if selected  
 dyes are used. III is less effective in covering streaks at  
 temps. below the boil. With IV at 235-250° F., both II and III  
 produce good levelness, III being somewhat better.  
 CC 25 (Dyes and Textiles Chemistry)  
 IT Nylon  
 (dyeing of)  
 IT Anion-exchanging substances  
 Base-exchanging substances or Cation-exchanging substances  
 (nylon dyeing with acid dyes in baths containing)  
 IT Dyeing  
 (of nylon, with acid level dyes)

L4 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1963:83207 CAPLUS  
 DN 47:53207  
 OREF 47:9019a-d  
 TI Ion-exchange resins in the textile industry  
 AU Borghetty, H. C.; Bernard, J. J.; Winters, J. C.  
 CS Rohm & Haas Co., Philadelphia, PA  
 SO Am. Dyestuff Repr. (1963), 42(Proc. Am. Assoc. Textile Chem. Colorists),  
 F338-42  
 DT Journal  
 LA Unavailable  
 AB A brief historical and theoretical discussion of ion exchange.  
 Ion-exchange resins will trade ions and neutralize and after  
 saturation with absorbed ions may be regenerated for further use. Cation-  
 exchange resins are large, insol., highly cross-linked resins  
 possessing (COOH) or (SO<sub>3</sub>H) groups capable of yielding H ions (or other  
 cations) in exchange for Na, Ca, Mg, etc. Anion-  
 exchange resins possess reactive basic groups, NH<sub>2</sub> or quaternary,  
 able to absorb anions. Complete deionization of H<sub>2</sub>O is obtained  
 by the use of both cationic and anionic resins. A partial  
 deionization of H<sub>2</sub>O with cationic resins in the Na form removes  
 the Ca and Mg ions to give softened H<sub>2</sub>O, satisfactory for textile  
 processing. It is proposed to use ion-exchange resins in wool  
 dyeing with acid colors by using the resins to change the  
 ionization characteristics of the dyebath by absorbing Na ions  
 and releasing H ions. It is suggested that the Na salt of the dye  
 could be used without the addition of the normal 5% of anhydrous Na<sub>2</sub>SO<sub>4</sub> and 3%  
 of H<sub>2</sub>SO<sub>4</sub> on the weight of the fiber. A field of investigation for the resins  
 is in their use to control the pH of indanthrene vat dye solns.  
 and thereby avoid the danger of fiber degradation. Ion-exchange  
 resins possess chemical groupings that act as dye mordants for  
 basic and acid dyes. They have been studied for the purpose of  
 improving the dyeing properties of synthetic fibers by their  
 incorporation into the fibers prior to spinning. The possibility of  
 attaching chemical groups to the resins which are capable of imparting H<sub>2</sub>O  
 repellency, flameproofing, mildewproofing, and static are being  
 investigated.  
 CC 25 (Dyes and Textiles Chemistry)  
 IT Rayon and other artificial fibers  
 (dyeing properties of, improvement with ion-exchange resins)  
 IT Ions  
 (electrolytic, exchange of, in textile industry)  
 IT Textiles  
 (ion exchangers in processing of)  
 IT Dyeing  
 (ion-exchange resins in wool, with acid and indanthrene vat dyes and in  
 improving dyeing properties of synthetic fibers)  
 IT Resinous products  
 (ion-exchanging, in textile industry)  
 IT 7732-18-5P, Water.  
 RL: PREP (Preparation)  
 (purification or conditioning of, by ion exchange, for textile manufacture)

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(FILE 'HOME' ENTERED AT 14:22:40 ON 29 FEB 2008)

FILE 'CAPLUS' ENTERED AT 14:22:49 ON 29 FEB 2008

L1 12854 SEA ABB=ON PLU=ON CATIONIC(L) (DYE? OR AZO OR MONOAZO OR  
DISAZO OR HYDRAZON?)  
L2 71224 SEA ABB=ON PLU=ON ANION(L) (EXCHANGE OR EXCHANG?)  
L3 62 SEA ABB=ON PLU=ON L1 AND L2  
D  
D 1-10 TI  
D 50-62 TI  
D 54 BIB ABS  
L4 15 SEA ABB=ON PLU=ON L3 AND DYES/SC  
D 1-15 BIB ABS IND

FILE HOME

FILE CAPLUS

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L3 ANSWER 30 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI A comparative study of clay minerals for pollution control

L3 ANSWER 31 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Manufacturing a waterproof dye layer on a substrate

L3 ANSWER 32 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Thermal-transfer printing of acrylic textiles

L3 ANSWER 33 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Removal of dyes from wastewater by a Nitron-based ion-exchange fiber



L3 ANSWER 34 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Replacing anions of organic cationic salts

L3 ANSWER 35 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Color image formation

L3 ANSWER 36 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Conversion of sparingly soluble inorganic salts of cationic  
dyes or fluorescent whiteners into easily soluble salts of organic  
acids

L3 ANSWER 37 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Differential staining of polyanions according to critical electrolyte  
concentration principles in mixed solvents

L3 ANSWER 38 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Preparation and properties of some 1,3,3-trimethyl-2-formylindolinium  
N-methyl-N-4-methoxyphenylhydrazone salts

L3 ANSWER 39 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Concentrated solutions of cationic dyes

L3 ANSWER 40 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Cationic dyes

=> d 13 34 39 40

L3 ANSWER 34 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1985:506307 CAPLUS  
 DN 103:106307  
 OREF 103:17037a,17040a  
 TI Replacing anions of organic cationic salts  
 IN Drexhage, Karl H.  
 PA Eastman Kodak Co., USA  
 SO U.S., 7 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4524204	A	19850618	US 1980-174959	19800804
PRAI	US 1980-174959		19800804		
OS	MARPAT 103:106307				

L3 ANSWER 39 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1982:144416 CAPLUS  
 DN 96:144416  
 OREF 96:23773a,23776a  
 TI Concentrated solutions of cationic dyes  
 IN Chalykh, E. A.; Sazanova, A. A.; Kozlov, A. I.; Stavinchuk, V. G.;  
 Ivanova, I. I.  
 PA USSR  
 SO U.S.S.R.  
 From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1981, (46), 140.  
 CODEN: URXXAF  
 DT Patent  
 LA Russian  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	SU 889676	A1	19811215	SU 1979-2806241	19790806
PRAI	SU 1979-2806241	A	19790806		

L3 ANSWER 40 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1982:21278 CAPLUS  
 DN 96:21278  
 OREF 96:3554h,3555a  
 TI Cationic dyes  
 IN Gleinig, Harald; Berger-Loehr, Bernd; Breig, Kurt  
 PA Bayer A.-G., Fed. Rep. Ger.  
 SO Ger. Offen., 11 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3013272	A1	19811008	DE 1980-3013272	19800405
	US 4342867	A	19820803	US 1981-245412	19810319
	EP 37506	A1	19811014	EP 1981-102164	19810323
	R: CH, DE, FR, GB, IT				
	JP 56155246	A	19811201	JP 1981-48517	19810402
PRAI	DE 1980-3013272	A	19800405		



L3 ANSWER 39 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1982:144416 CAPLUS  
 DN 96:144416  
 OREF 96:23773a,23776a  
 TI Concentrated solutions of cationic dyes  
 IN Chalvkh, E. A.; Sazanova, A. A.; Kozlov, A. I.; Stavinchuk, V. G.;  
 Ivanova, I. I.  
 PA USSR  
 SO U.S.S.R.  
 From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1981, (46), 140.  
 CODEN: URXXAF  
 DT Patent  
 LA Russian  
 FAN CNT 1  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 889676	A1	19811215	SU 1979-2806241	19790806
PRAI SU 1979-2806241	A	19790806		

AB Concentrated solns. of cationic dyes are prepared by treating  
 aqueous solns. of salts of cationic dyes with ion  
 exchange resin and filtering the product. The concentration and  
 stability of the concentrated solns. are increased by using as an ion-  
 exchange resin an anion exchanger containing  
 quaternary pyridinium groups, substituted aliphatic amino groups, or  
 quaternary ammonium groups.

=> d 13 40-55 ti

L3 ANSWER 40 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Cationic dyes

L3 ANSWER 41 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Cationic dyes

L3 ANSWER 42 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Removal of ionic dyes from aqueous solutions

L3 ANSWER 43 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Cationic dyes



L3 ANSWER 44 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Transformations of benzothiazole cationic azo  
dyes in the presence of alkali reagents

L3 ANSWER 45 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Characterization of micellar solutions using surfactant ion electrodes

L3 ANSWER 46 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Separation and identification of water-soluble food dyes by ion-exchange  
and soap thin-layer chromatography

L3 ANSWER 47 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Decoloration of dye waste water

L3 ANSWER 48 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Color removal by clays. Kinetic study of adsorption of cationic  
and anionic dyes

L3 ANSWER 49 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Ion exchange process for separating organic impurities from aqueous  
solutions

L3 ANSWER 50 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Azure dyes. Purification and physicochemical properties. II.  
Purification of azure B

L3 ANSWER 51 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Concentrated dye solutions useful in textile treatment

L3 ANSWER 52 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Cellulose-based permselective membranes

L3 ANSWER 53 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Azo dyes

L3 ANSWER 54 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Concentrated solutions of cationic dyes

L3 ANSWER 55 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
TI Interionic diffusion in the acid dyeing of polyamides

=> d 13 50 51 53 54 bib abs ind

L3 ANSWER 50 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1975:455510 CAPLUS  
 DN 83:55510  
 OREF 83:8747a,8750a  
 TI Azure dyes. Purification and physicochemical properties. II.  
 AU Loehr, W.; Grubhofer, N.; Sohmer, I.; Wittekind, D.  
 CS Dep. Hum. Anat., Univ. Freiburg/Br., Freiburg/Br., Fed. Rep. Ger.  
 SO Stain Technology (1975), 50(3), 149-56  
 CODEN: STTEAW; ISSN: 0038-9153  
 DT Journal  
 LA English  
 AB A method was described for the purification of azure B in quantities sufficient for biol. staining expts. on a large scale. The method used column chromatog. with 2 columns. In column A, with silica gel as adsorbent, the azure B fraction was isolated from a suitable substrate (azure B obtained by a modification of Bernthsen's synthesis of methylene blue or polychrome methylene blue) by using an  $\text{OAc}-\text{HCO}_2^-$  mixture as eluent. In column B, on an amberlite polymeric adsorbent (XAD-2), the  $\text{OAc}-\text{HCO}_2^-$  anions were exchanged for  $\text{Cl}^-$ . Regeneration of both columns was possible. Purification of azure B was economical. The method was also applicable to the purification of other cationic dyes.  
 CC 9-6 (Biochemical Methods)  
 ST azure B purifn chromatog; cation dye purifn  
 IT Staining, biological  
 IT (azure B in, purification and properties of)  
 IT Dyes  
 IT (cationic, purification and properties of)  
 IT E31-65-EP E31-65-EP  
 RL: PREP (Preparation)  
 (purification and properties of)

L3 ANSWER 51 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1974:49266 CAPLUS  
 DN 80:49266  
 OREF 80:8035a,8038a  
 TI Concentrated dye solutions useful in textile treatment  
 IN Blass, Ulrich; Entschel, Roland  
 PA Sandoz Ltd.  
 SO Patentschrift (Switz.), 3 pp.  
 CODEN: SWXXAS  
 DT Patent  
 LA German  
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI CH 540387	B	19730928	CH 1971-14851	19700210
CH 1485171	D	19730430		
PRAI CH 1971-14851	A	19700210		
AB	The solubility of cationic anthraquinone, oxazine, and quinophthalone dyes is improved by exchanging the anions for colorless, solubilizing anions in aqueous or aqueous organic solns. Thus, a solution of lead diacetate [301-04-2] 17, HOAc 15, and H <sub>2</sub> O 50 parts is mixed at 80 deg. with a solution of 45 parts [3-[[4-amino-3-bromoanthraquinon-1-yl]amino]propyl]trimethylammonium chloride (I) [50480-22-3] in 180 parts H <sub>2</sub> O, kept 2 days, and filtered to give a stable, deep blue solution useful for dyeing acrylic fibers.			
IC D06P				
CC 40-6 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)				
ST	solubilizing cationic dye, anion exchange dye; anthraquinone dye solubilizing; lead acetate reaction dye			
IT Dyes	(cationic, anion exchange of, for improved solubility)			
IT Solubilization	(of cationic dyes, by anion exchange)			
IT Anion exchange	(of cationic dyes, for improved solubility)			
IT 301-04-2 513-77-9	RL: FROC (Process)			
	(anion exchange of, with cationic dyes for improved solubility)			
IT 50807-92-6	RL: USES (Uses)			
	(dye, anion exchange of, with barium carbonate for improved solubility)			
IT 50480-22-3 50807-90-4	RL: USES (Uses)			
	(dye, anion exchange of, with lead acetate for improved solubility)			

L3 ANSWER 53 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
 AN 1972:407283 CAPLUS  
 DN 77:7283  
 OREF 77:1255a,1258a  
 TI Azo dyes  
 IN Kruckenberg, Winfried  
 FA Farbenfabriken Bayer A.-G.  
 SO Ger. Offen., 173 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 2036997	A	19720203	DE 1970-2036997	19700725
DE 2036997	B2	19750607		
DE 2036997	C3	19760108		
AT 303219	B	19721110	AT 1971-6385	19710722
CA 940123	A1	19740115	CA 1971-118841	19710722
AT 323701	B	19750725	AT 1971-11261	19710722
BE 770383	A1	19711201	BE 1971-106251	19710723
NL 7110207	A	19720127	NL 1971-10207	19710723
FR 2104807	A5	19720421	FR 1971-27152	19710723
FR 2104807	B1	19750711		
CH 7110369	D	19760831	CH 1971-10369	19710723
CH 586312	B5	19770331		
JP 51037295	B	19761014	JP 1971-54718	19710723
ES 393608	A1	19750801	ES 1971-393608	19710724
GB 1322835	A	19730711	GB 1971-34869	19710726
JP 51123377	A	19761028	JP 1976-35238	19760401
PRAI DE 1970-2036997	A	19700725		
AB	Cationic dye I(R <sup>3</sup> = OMe, R <sup>1</sup> = H, X-9 = H <sub>2</sub> PO <sub>4</sub> -)(II) [34828-18-7] and cationic dye I(R = H R <sup>1</sup> = Me, X- = H <sub>2</sub> PO <sub>4</sub> -) [34828-19-8] were prepared. Anion exchange gave 6 other I with X- = Cl-, I-, or 0.5 SO <sub>4</sub> 2-. I dyed polyacrylonitrile fibers, acid-modified polyamide and polyester piece goods, and East Indian sheepskin yellowish red to bluish red shades. For example, 5-amino-3-phenyl-1,2,4-thiadiazole was pulverized, treated with 85-90% H <sub>2</sub> PO <sub>4</sub> , diazotized, and coupled with PhN(CH <sub>2</sub> CH <sub>2</sub> OMe)CH <sub>2</sub> CH <sub>2</sub> NMe <sub>2</sub> CH <sub>2</sub> Ph Cl- (prepared by condensing PhNHCH <sub>2</sub> CH <sub>2</sub> OMe with ClCH <sub>2</sub> CH <sub>2</sub> NMe <sub>2</sub> .HCl then PhCH <sub>2</sub> Cl) to give II, bluish red on polyacrylonitrile.			
IC C09B				
CC 40-4 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)				
ST	dye azo cationic; polyacrylonitrile azo dye; thiadiazole azo dye; sheepskin dye; polyamide dye; polyester dye			
IT Dyes, azo	(phenylazo)thiadiazole quaternized ammonium derivs., synthetic fibers and leathers)			
IT Acrylic fibers				
IT Polyamide fibers				
IT Polyester fibers				
IT RL: USES (Uses)	(dyes for, (phenylazo)thiadiazole quaternized ammonium derivs. as)			
IT Dyeing	(of synthetic fibers and sheep leather with quaternized ammonium derivs. of (phenylazo)thiadiazole compds.)			
IT Leather	(sheepskin, dyes for, (phenylazo)thiadiazole quaternized ammonium derivs. as)			
IT 34828-18-7P 34828-19-8P 36790-24-6P 36790-25-7P 36790-26-8P 36790-27-9P 36790-28-0P 36790-29-1P 36790-30-4P 36790-31-5P 36790-32-6P	RL: IMF (Industrial manufacture); PREP (Preparation) (preparation of)			

L3 ANSWER 53 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L3 ANSWER 54 OF 62 CAPLUS COPYRIGHT 2008 ACS on STN  
AN 1970:531923 CAPLUS

DN 73:131923

OREF 73:21493a,21496a

TI Concentrated solutions of cationic dyes

IN Blass, Ulrich; Entschel, Roland

PA Sandoz Ltd.

SO Ger. Offen., 12 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2001816	A	19700806	DE 1970-2001816	19700116
	DE 2001816	C3	19770120		
	CH 69735	D	19720851	CH 1969-73569	19690120
	CH 531610	A	19721215	CH 1969-531610	19690120
	BE 744494	A	19700615	BE 1970-744494	19700115
	BE 744495	A	19700615	BE 1970-744495	19700115
	GB 1296685	A	19721108	GB 1970-1296685	19700115
	GB 1296825	A	19721108	GB 1970-1296825	19700115
	FR 2028725	A5	19701016	FR 1970-1531	19700116
	FR 2028726	A5	19701016	FR 1970-1532	19700116
	BR 7016101	D0	19730419	BR 1970-216101	19700116
	BR 7016102	D0	19730419	BR 1970-216102	19700116
	ES 375604	A1	19720816	ES 1970-375604	19700119
	ES 375603	A1	19721016	ES 1970-375603	19700119
	JP 52017847	B	19770618	JP 1970-5000	19700119
	US 3956271	A	19760611	US 1974-439913	19740206
FRAI	CH 1969-735	A	19690120		
	CH 1969-5257	A	19690408		
	CH 1969-11592	A	19690730		
	US 1970-2347	A2	19700112		
	US 1970-2348	A2	19700112		
GI	For diagram(s), see printed CA Issue.				
AB	Concentrated solns. were prepared from cationic dyes, e.g. 4,2-O2N(R)CGHSN:NC6H4NEtCH2CH2N +Me2NH2-p X - (I, R = CN or Cl, X = Cl or 0.5 SO4) or II, by exchange of the anions, so that the resulting dye was more soluble than the initial one. Thus, I (R = X = Cl), HOAc, PbO, and H2O were heated 30 min at 85°, PbCl2 was filtered off, (NH4)2SO4 was added, and the mixture was stirred 2 hr to give a deep red dye solution, useful for dyeing polyacrylonitrile fibers.				
IC	C09B; C09A				
CC	39 (Textiles)				
ST	dye cationic concd soln; cationic				
	dye concd soln; polyacrylonitrile cationic dye				
IT	Dyes				
	(cationic, concentrated solns. of)				
IT	Fiber, acrylic, uses and miscellaneous				
	RL: USES (Uses)				
	(dye solns. for, concentrated cationic)				

=> log h

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

136.67

136.88

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-16.80

-16.80

SESSION WILL BE HELD FOR 120 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 14:50:47 ON 29 FEB 2008